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Gazette of Republic of China [19] [12]

[11] Publication No.:322904
[44] Date: 11 December 1997 **Utility Model** Total 5 pages
[51] Classification: B65F1/14

[54] TITLE: A cover-lifting device for a garbage bin with a pedal-driven cover

[21] Application No.: 85209254 [22] Application Date: 19 June 1996

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[57] Claims:

Claims

1. A cover-lifting device for a garbage bin with a pedal-driven cover, wherein the garbage bin is connected with the cover via a pivotal connector so that the cover can be lifted, and an internal face of a portion of the pivotal connector is engaged with a vertical rod extending downwards along an internal face of the garbage bin, and a lower end of the vertical rod is inserted through a hole defined in the bottom of the garbage bin, the cover-lifting device being characterized in that the cover-lifting device consists of a horizontal rod, a crank and a pedal, wherein:

the horizontal rod is a circular rod inserted through the bottom of the garbage bin, and includes an internal end inserted in a fixed mounting slot defined in the base and an external end bent into a stepped structure;

the crank is a rod with a proper length, and includes an end securely connected with the internal end of the horizontal rod so that it swings up and down as the horizontal rod rotates and another end pivotally connected with the lower end of the vertical rod, and extends opposite to the stepped structure;

the pedal is mounted on the stepped structure of the horizontal rod so that a user can tread the pedal in its uppermost position so as to rotate the horizontal rod so as to push up the vertical rod via upward swinging of the crank in order to lift the cover, and that when the user release the pedal, the cover due to its own weight closes the garbage bin so as to swing down the crank via downward movement of the vertical rod in order to move the pedal back to its uppermost position in order to be trodden to lift the cover again.

Description of drawing:

Figure 1 is an exploded view of a garbage bin with a pedal-driven cover according to the preferred embodiment of the present invention.

Figure 2 is a perspective view of the garbage bin with a pedal-driven cover according to the preferred embodiment of the present invention.

Figure 3A shows a cover-lifting device in a first position.

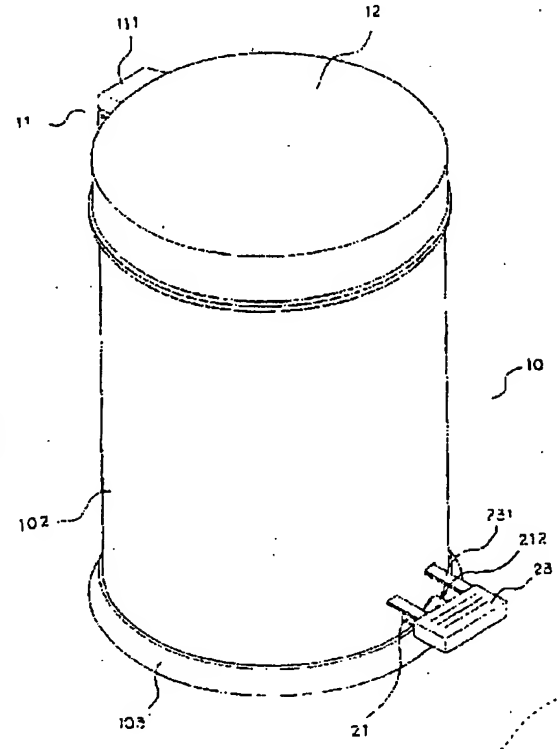
Figure 3B shows the cover-lifting device in a second position.

Figure 4A shows a cover lifted via a vertical rod.

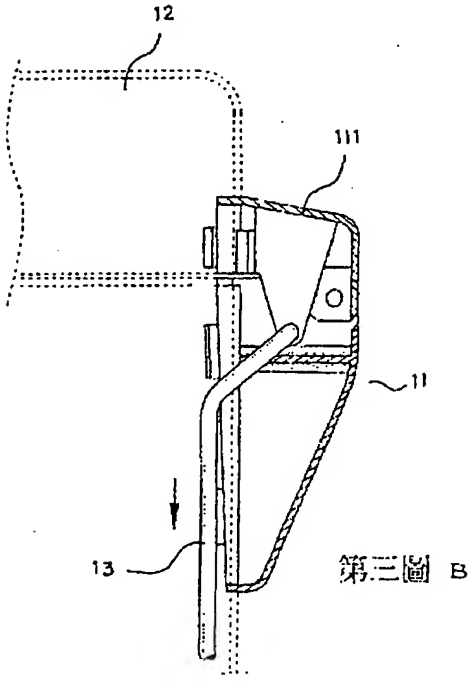
Figure 4B shows action of the vertical rod as the cover is closing.

Figure 5A shows a pedal and a stepped structure in a first position.

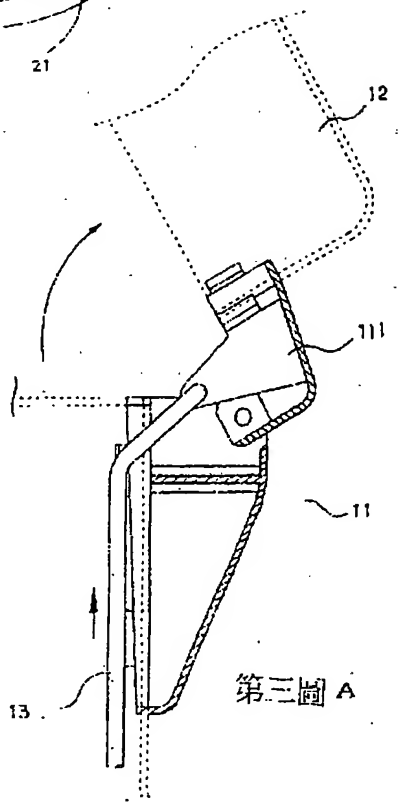
Figure 5B shows the pedal and the stepped structure in a second position.



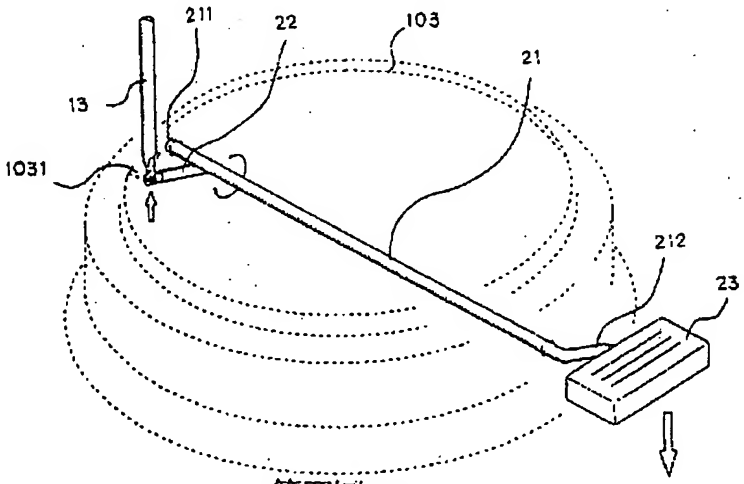
第二圖



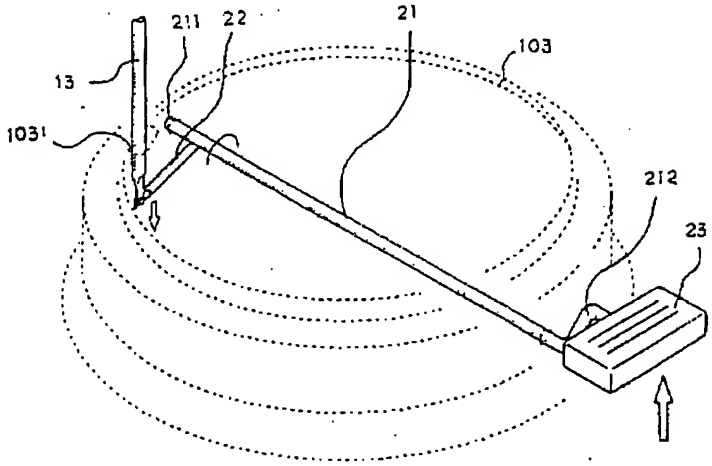
第三圖 B



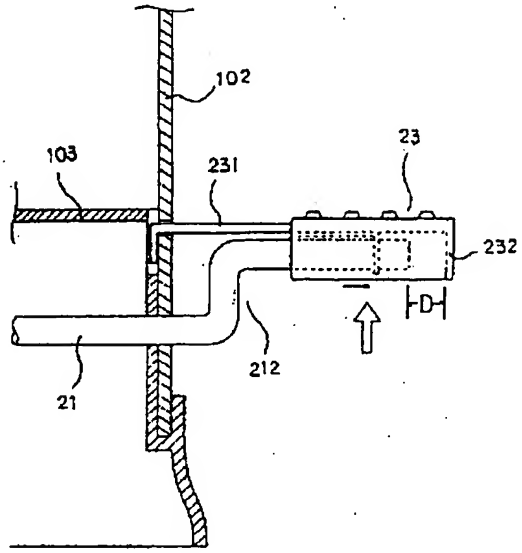
第三圖 A



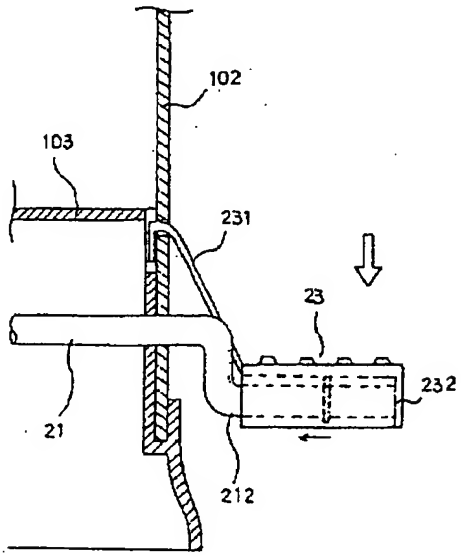
第四圖 A



第四圖 B



第五圖 A



第五圖 B

PUBLICATION COPY

Publication No.: 322904

Application Date	19 June 1996
Application No	85209254
Classification	B65F 1/14

UTILITY MODEL SPECIFICATION

1. TITLE: A cover-lifting device for a garbage bin with a pedal-driven cover

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NATIONALITY : Republic of China, Taiwan

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Summary

A cover-lifting device for a garbage bin with a pedal-driven cover, wherein the garbage bin is connected with the cover via a pivotal connector so that the cover can be lifted, and an internal face of a portion of the pivotal connector is engaged with a vertical rod extending downwards along an internal face of the garbage bin, and a lower end of the vertical rod is inserted through a hole defined in the bottom of the garbage bin, the cover-lifting device being characterized in that the cover-lifting device consists of a horizontal rod, a crank and a pedal. A user can tread the pedal in its uppermost position so as to rotate the horizontal rod so as to push up the vertical rod via upward swinging of the crank in order to lift the cover. When the user release the pedal, the cover due to its own weight closes the garbage bin so as to swing down the crank via downward movement of the vertical rod in order to move the pedal back to its uppermost position in order to be trodden to lift the cover again.

Detailed Description of Invention

The present invention relates to a cover-lifting device for a garbage bin with a pedal-lifted cover and, more particularly, to a cover-lifting device that is structurally simple and can be easily assembled.

There are various conventional garbage bins with pedal-driven covers. Typically, such a cover is lifted via treading a pedal that can be moved vertically upwards and downwards. Another end of the pedal is pivotally connected with a fixed shaft via a gear and the gear is engaged with a rack formed at a lower end of a vertical rod. When the rack is moved upwards due to rotation of the gear, the vertical rod is moved upwards so as to lift the cover. On the contrary, when the vertical rod is moved downwards due to the closing cover, the rack causes the gear to rotate in an opposite direction so as to move the pedal upwards. Thus, the pedal can be trodden so as to lift the cover.

Although such a typical pedal-driven cover has long been used commonly, because the vertical rod is connected with the pedal via the engagement of the rack and the gear, and because the engagement must be retained in a proper status via other elements, the engagement tends to loose after this structure is used for a period of time so that the cover cannot be adequately lifted or that the pedal cannot return to its original position when the cover has closed. Hence, garbage bins of this structure are often denounced by users and cannot be commonly used.

The present invention is therefore intended to obviate or at least alleviate the problems encountered in prior art.

It is the objective of the present invention to provide a cover-lifting device for a garbage bin with a pedal-lifted cover so that due to via leverage of a horizontal rod, downward movement of a pedal installed at an external end of the horizontal rod can cause upward movement of a vertical rod that supports the cover. On the contrary, when the pedal is released, the vertical rod moves downwards as the cover is closing. The horizontal rod is rotated in an opposite direction so that the pedal returns to its original position. Thus, the pedal can be trodden in order to lift the cover again.

Detailed structures and features of the invention will be further described referring to the attached drawings.

Figure 1 is an exploded view of a garbage bin with a pedal-driven cover according to the preferred embodiment of the present invention.

Figure 2 is a perspective view of the garbage bin with a pedal-driven cover according to the preferred embodiment of the present invention.

Figure 3A shows a cover-lifting device in a first position.

Figure 3B shows the cover-lifting device in a second position.

Figure 4A shows a cover lifted via a vertical rod.

Figure 4B shows action of the vertical rod as the cover is closing.

Figure 5A shows a pedal and a stepped structure in a first position.

Figure 5B shows the pedal and the stepped structure in a second position.

Referring to the drawings, a cover-lifting device 20 according to the present invention is installed at a bottom of a garbage bin 10. The garbage bin 10 is connected via a pivotal connector 11 with a cover 12 so that the cover 12 can be lifted or close the garbage bin 10. An internal face of a portion 111 of the pivotal connector 11 is engaged with a vertical rod 13 extending downwards along an internal face 101 of the garbage bin 10. A lower end of the vertical rod 13 is inserted through a hole 1031 defined in the bottom of the garbage bin 10. In this embodiment, the garbage bin 10 consists of a hollow cylinder 102 and a detachable base 103. Hence, the hole 1031 is defined in an upper face of the base 103.

The cover-lifting device 20 consists of a horizontal rod 21, a crank 22 and a pedal 23. The horizontal rod 21 is a circular rod inserted through the bottom of the garbage bin 10. In this embodiment, the horizontal rod 21 is inserted through the base 103 as shown in Figures 1, 3A and 3B. The base 103 is received in a lower end of the hollow cylinder 102. Thus, the horizontal rod 21 must be inserted through a hole 1021 defined in the hollow cylinder 102 before it is inserted through the base 103 as shown in Figure 2.

An internal end 211, with a proper length C, of the horizontal rod 21 is inserted through the hole 1031 defined in the base 103, an external end 212 of the horizontal rod 21 is bent into a stepped structure 212.

The crank 22 is made of a linear rod with a proper length. An end of the crank 22 is

securely connected with the internal end 211 of the horizontal rod 21 so that it swings up and down as the horizontal rod 21 rotates. Another end of the crank 22 is pivotally connected with the lower end of the vertical rod 13. The crank 22 extends in a direction opposite to that of the stepped structure 212.

The pedal 23 is mounted on the stepped structure 212 of the horizontal rod 21 to be trodden by a user.

Only the internal end 211 of the horizontal rod 21 is mounted on a fixed mounting slot 1031 defined in an internal face of the base 103. That is, the horizontal rod 21 does not include any structure to prevent itself from sliding to the exterior. In order to avoid the horizontal rod 21 sliding to the exterior so that its internal end 211 is disengaged from the fixed mounting slot 1031, the pedal 23 is designed to include two elastic pulling plates 231 for engagement with a wall of the garbage bin 10 (or the hollow cylinder 102) as shown in Figures 1 and 2.

Reference is made to Figures 5A and 5B. Figure 5A shows the pedal 23 before it is trodden. In this Figure, it is clearly seen that the elastic pulling plates 231 of the pedal 23 are engaged with proper portions of the hollow cylinder 102, and a proper gap D is defined between the stepped structure 212 of the horizontal rod 21 and an external face 232 of the pedal 23. As the gap D is less than the length C of the internal end 211 of the horizontal rod 21, it keeps the internal end 211 of the horizontal rod 21 engaged with the fixed mounting slot 1031. Figure 5B shows the pedal 23 after it is trodden. Since the elastic pulling plates 231 of the pedal 23 include a fixed length, as trodden, the pedal 23 is dragged towards the interior via the plastic pulling plates 231. The gap D is the total distance by which the pedal 23 is

moved from its uppermost position to its lowermost position. Hence, as the pedal 23 is moved to its lowermost position, an external end of the stepped structure 212 still contacts the external face 232 thereof. Thus, the gap D is eliminated. Therefore, due to the structure, the present invention ensures the horizontal rod 21 snugly engaged with the garbage bin 10.

The movement of the present invention is shown in Figures 3A, 3B, 4A and 4B. The pedal 23 is not located right above the horizontal rod 21. Thus, when a user treads the pedal 23 that should be located in the uppermost position, as shown in Figure 4A, the horizontal rod 21 is rotated clockwise due to a torque. Furthermore, the vertical rod 13 is moved upwards due to upward swinging of the crank 22. Hence, as moved upwards, the vertical rod 13 pushes up the portion 111 of the pivotal connector 11, as shown in Figure 3A, so as to lift the cover 12. Of course, an angle by which the cover 12 can be lifted should better not be greater than 60 degrees so that the cover 12 can automatically return to its original position due to its own weight.

As the pedal 23 is released from the foot of the user, since an upward force is not exerted on the cover 12, the pedal 23 can automatically return to its original position due to its own weight, as shown in Figure 3B. At this instant, the crank 22 still can swing down due to downward movement of the vertical rod 13. Thus, the horizontal rod 21 is rotated counterclockwise, as shown in Figure 4B. Moreover, the pedal 23 returns to its original position so that it can be trodden so as to lift the cover 12 again.

In addition, a conventional C-clip can be used to prevent disengagement of the horizontal rod 21.

As mentioned above, the cover-lifting device of the present invention is structurally simple and can indeed smoothly lift the cover. Furthermore, as using a torque, its operation is better than that of the conventional arrangement of the gear and the rack.

Claims

1. A cover-lifting device for a garbage bin with a pedal-driven cover, wherein the garbage bin is connected with the cover via a pivotal connector so that the cover can be lifted, and an internal face of a portion of the pivotal connector is engaged with a vertical rod extending downwards along an internal face of the garbage bin, and a lower end of the vertical rod is inserted through a hole defined in the bottom of the garbage bin, the cover-lifting device being characterized in that the cover-lifting device consists of a horizontal rod, a crank and a pedal, wherein:

the horizontal rod is a circular rod inserted through the bottom of the garbage bin, and includes an internal end inserted in a fixed mounting slot defined in the base and an external end bent into a stepped structure;

the crank is a rod with a proper length, and includes an end securely connected with the internal end of the horizontal rod so that it swings up and down as the horizontal rod rotates and another end pivotally connected with the lower end of the vertical rod, and extends opposite to the stepped structure;

the pedal is mounted on the stepped structure of the horizontal rod so that a user can tread the pedal in its uppermost position so as to rotate the horizontal rod so as to push up the vertical rod via upward swinging of the crank in order to lift the cover, and that when the user release the pedal, the cover due to its own weight closes the garbage bin so as to swing down the crank via downward movement of the vertical rod in order to move the pedal back to its uppermost position in order to be trodden to lift the cover again.

公告本

322904

申請日期	85.6.19
案號	85209254
類別	Int.Cl[6] B65F1/14

（以上各欄由本局填註）

A4
C4
322904

發明 新型 專利說明書

一、發明新型名稱	中文	腳踩式掀蓋垃圾筒之掀蓋裝置
	英文	
二、發明創作人	姓名	呂定磬
	國籍	中華民國
	住、居所	桃園市寶慶路486號
三、申請人	姓名（名稱）	倍興實業有限公司
	國籍	中華民國
	住、居所（事務所）	桃園市永安北路461巷72弄6號1樓
	代表人姓名	呂定磬

裝 訂 線

經濟部中央標準局員工消費合作社印製

本紙張尺度適用中國國家標準（CNS）A4規格（210×297公釐）

四、中文創作摘要（創作之名稱：腳踩式掀蓋垃圾筒之掀蓋裝置）

一種腳踩式掀蓋垃圾筒之掀蓋裝置，主要乃係由一被裝設在具有頂蓋垃圾筒底部之特設腳踩式掀蓋裝置所構成，其中該垃圾筒除了藉一樞接裝置與該頂蓋連結成一體，俾使該頂蓋得以具有向上掀起之功能外，該樞接裝置之上轉折部內側並鉤設有一沿著該垃圾筒內壁向下懸垂之推拉桿，而且該推拉桿之底端係正好套入該垃圾筒底部所設具有適當大小之對應孔洞中；而該腳踩式掀蓋裝置則係由一水平驅動桿、一擺桿及一踏板所組成，其特徵為：當使用者以腳踩踏傾斜處於最高位置處之踏板時，乃可驅使該水平驅動桿產生轉動，進而使該推拉桿因該擺桿之向上擺動而向上移動，以達到掀開垃圾筒所設頂蓋之功效；反之，當使用者將腳移開該踏板時，該頂蓋即可因其自重而向下覆蓋，進而使該擺桿因該推拉桿之向下移動而向下擺動，從而使該踏板得以再次回復至傾斜最高位置處，以提供下一回垃圾筒頂蓋之踩踏掀開功能者。

英文創作摘要（創作之名稱：）

（請先閱讀背面之注意事項再填寫本頁各欄）

訂

五、創作說明（1）

本案乃係為一種腳踩式掀蓋垃圾筒之掀蓋裝置，尤指一種結構簡單、組裝容易，而且專供腳踩式掀蓋垃圾筒使用之新型掀蓋裝置。

按目前習見腳踩式掀蓋垃圾筒之種類乃非常繁多，而其主要之掀蓋構造大部係由上向下踩踏一可垂直上下運動之踏板，由於該踏板之另一端乃係藉一齒輪樞接於一固定軸上，而且該齒輪乃係與一垂直推拉桿底端所設之齒條構造嚙合，所以一旦該齒條構造因該齒輪之作動而向上移動時，該垂直推拉桿乃會向上移動以將該垃圾筒頂蓋掀開；反之，當該垂直推拉桿因該垃圾筒頂蓋之覆蓋動作而向下移動時，該齒條構造乃會趨使該齒輪產生反向旋轉之動作，進而使該踏板自動由下方移回上方之功效者，以達成垃圾筒藉踩踏功能以獲致掀蓋之功效者。

固然該種踩踏掀蓋之構造，係已被廣為使用，而且亦已被使用了一段非常長之時間，但因該垂直推拉桿乃係藉其底端所設之齒條構造使與該踏板另一端所設之齒輪嚙合，而且該嚙合之構造又必須藉其他構件使其保持適當之嚙合緊密度，所以此種構造之垃圾筒於使用一段時間後，乃極易產生嚙合構造鬆脫之現象，進而造成無法有效將其頂蓋掀開之狀況；抑或是造成頂蓋雖已蓋上但其踏板卻不能回復至上方原始位置之情況，所以此種構造之垃圾筒乃常被使用者所詬病，進而造成其無法被廣泛使用之缺憾。

有鑒於此，本創作人乃憑其多年從事家庭用品設計及製造之經驗，積極研究改良，而研創出一種腳踩式掀蓋垃

（請先閱讀背面之注意事項再填寫本頁）

裝 訂 線

五、創作說明（2）

圾筒之掀蓋裝置。

本創作之創作目的，係提供一種腳踩式掀蓋垃圾筒之掀蓋裝置，俾藉著特設水平驅動桿之槓桿旋轉功能，以使用以頂撐垃圾筒頂蓋之推拉桿可以因該水平驅動桿外端所設踏板之向下作動而產生向上推頂之功效，進而使該垃圾筒頂蓋可以形成適當傾斜度之掀開狀況；反之，當該踏板不再受力時，該推拉桿即可因該頂蓋自動覆蓋之動作而自動向下移動，進而使該水平驅動桿得以產生反向槓桿旋轉之作用，以使該踏板可以向上回復至原始之最度處，俾提供另一階段踩踏掀蓋之功效者。

茲為進一步闡明本創作之詳細構造及其特徵，特配合附圖所示，詳述於后：

圖式之簡單說明：

第一圖：係本創作所示腳踩式掀蓋垃圾筒實施例之立體構造分解圖。

第二圖：係本創作所示腳踩式掀蓋垃圾筒實施例之立體構造組合圖。

第三A圖：係本創作所示掀蓋裝置之第一作動圖。

第三B圖：係本創作所示掀蓋裝置之第二作動圖。

第四A圖：係本創作所示頂蓋因推拉桿作用而掀開之作動圖。

第四B圖：係本創作所示頂蓋覆蓋時，該推拉桿之作動示意圖。

第五A圖：係本創作所示踏板與階級構造之第一作動圖。

（請先閱讀背面之注意事項再填寫本頁）

裝 訂 線

五、創作說明（３）

第五Ｂ圖：係本創作所示踏板與階級構造之第二作動圖。

請參閱圖式所示，本創作所示腳踩式掀蓋垃圾筒之掀蓋裝置，主要乃係由一被裝設在垃圾筒10底部之特設腳踩式掀蓋裝置20所構成，其中該垃圾筒10除了藉一樞接裝置11與一可覆蓋於該垃圾筒10頂端之頂蓋12連結成一體，俾使該頂蓋12得以具有向上掀起或向下覆蓋之功能外，該樞接裝置11之上轉折部 111內側並鉤設有一沿著該垃圾筒10內壁 101向下懸垂之推拉桿13，而且該推拉桿13之底端係正好套入該垃圾筒10底部所設具有適當大小之對應孔洞中，在本實施例中，因該垃圾筒10乃係由一中空之外筒 102與一分離之底座 103所構成，所以該垃圾筒10底部所設之對應孔洞即係指設於該底座 103頂面適當位置處之貫穿孔洞1031。

而該腳踩式掀蓋裝置20主要乃係由一水平驅動桿21、一擺桿22及一踏板23所組成，其中該水平驅動桿21乃係由一自該垃圾筒10底部外側適當位置處所貫入之水平圓桿所構成，在本創作所示之實施例中，該水平驅動桿21主要乃係被套設在該底座 103上，即如第一圖及第三Ａ、Ｂ圖所示，另因該底座 103乃係被套置在該中空外筒 102之底端處，所以該水平驅動桿21於套入該底座 103前，乃必須先套穿過該中空外筒 102所設之對應孔洞1021，即如第二圖所示。

該水平驅動桿21除了以適當長度Ｃ之內端 211套置在該底座 103內壁所設之對應固定跨槽1031中外，該水平驅

（請先閱讀背面之注意事項再填寫本頁）

裝 訂 線

五、創作說明（4）

動桿21之外端則係被彎折成一階級構造 212。

而該擺桿22則係由一具適當長度之直桿所構成，該擺桿22除了以其一端固接在該水平驅動桿21之近內端 211處，以使其得以隨著該水平驅動桿21之轉動而上下擺動外，其另一端則係正好與該推拉桿13之底端樞接成一體；而且該擺桿22之沿伸方向係大致與該階級構造 212之彎折方向呈反向對應者。

而該踏板23，則係套設在該水平驅動桿21最外側所設之階級構造 212處，俾提供使用者之踩踏功能。

由於該水平驅動桿21乃僅係以其內端 211跨置在該底座 103內壁所設之固定跨槽1031上，亦即該水平驅動桿21乃無可防止其向外側滑動之構造，所以為了防止該水平驅動桿21因向外滑動而造成其內端 211與該固定跨槽1031脫離之現象，本創作乃另行於該踏板23之內側緣處設有兩道可拉固在該垃圾筒10（或中空外筒 102）側壁之彈性拉板 231，即如第一圖及第二圖所示。

請參閱第五A圖及第五B圖所示，其中該第五A圖係呈現該踏板23尚未被向下踩踏之狀況圖，由該圖式中，吾人可以清楚看出該踏板23除了以彈性拉板 231鉤設在該中空外筒 102之側壁適當位置處外，供套置該踏板23之階級構造 212外端處則與該踏板23之外側壁 232形成一適當之間距D，因該間距D係比該水平驅動桿21所設內端 211之長度C者短，所以其乃能確保該水平驅動桿21之內端 211不致與該固定跨槽1031分離。至於第五B圖則係該踏板23

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裝 訂 線

五、創作說明（５）

被向下踩踏後之構造示意圖。由於該踏板23所設之彈性拉板 231乃係呈固定長度者，所以當該踏板23被向下踩踏時，該踏板23乃會因被該彈性拉板 231之拖拉而造成朝內移動之現象，其中該間距Ｄ即係該踏板23在由最頂端處被踩踏至最底端處時，使該踏板23向內側移動之總距離，故當該踏板23被最踩踏至最底端處時，該階級構造 212之外端乃會與該踏板23之外側壁 232接觸在一起，進而使該間距Ｄ消失，所以本創作在該構造之作用下，乃可確保該水平驅動桿21可以被緊固在該垃圾筒上。

至於本創作之作動圖則如第三Ａ、Ｂ圖及第四Ａ、Ｂ圖所示，由於該踏板23乃係處於該水平驅動桿21之傾斜上方處，亦即該踏板23並不是處於該水平驅動桿21之正上方處，所以當使用者以腳踩踏該處於最高位置處之踏板23時，即如第四Ａ圖所示，該水平驅動桿21乃會因力矩之原理而產生順時向之轉動，進而使該推拉桿13得以因該擺桿22向上擺動之動作而向上移動，故當該推拉桿13向上移動時，藉由該推拉桿13推頂該樞接裝置11所設上轉折部 111之功能，即如第三Ａ圖所示，乃可使該垃圾筒所設頂蓋12達到被掀開之功效。當然該頂蓋12被掀開之角度係以不大於60度角者為佳，俾能有效利用該頂蓋12之自重以達到自動覆蓋閉合之功效者。

而當使用者將其腳移開該踏板23時，由於該頂蓋12失去了向上推頂之作用力，其乃可因其自重而形成向下覆蓋閉合之運作，即如第三Ｂ圖所示，此時，該擺桿22乃會因

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裝 訂 線

五、創作說明（６）

該推拉桿13之向下移動而向下擺動，從而使該水平驅動桿21產生逆時向之轉動，即如第四Ｂ圖所示，進而使該踏板23得以再次回復至原來之傾斜高度處，俾提供下一回垃圾筒頂蓋之踩踏掀開功能者。

另外，有關防止該水平驅動桿21脫落之構造，當然亦可藉助習知Ｃ型扣之卡定結構以達成之。

綜上所陳，由於本創作所提供腳踩式掀蓋垃圾筒之掀蓋裝置，除了具有組成構造簡易之好處外，其亦的確具有可順利達成掀開垃圾筒頂蓋之功效，甚至因該掀蓋裝置之作動原理乃係屬一種物理力矩之利用，所以其作動之功效乃係可絕對優於一般以齒輪嚙合傳動之習知垃圾筒構造者，故而本創作乃完全符合新型專利之要件要求，所以懇請貴審查委員詳加審理本案，並早日賜准合法之專利權，實感德便。

六、申請專利範圍

一種腳踩式掀蓋垃圾筒之掀蓋裝置，主要乃係由一被裝設在具有頂蓋垃圾筒底部之特設腳踩式掀蓋裝置所構成，其中該垃圾筒除了藉一樞接裝置與該頂蓋連結成一體，俾使該頂蓋得以具有向上掀起之功能外，該樞接裝置之上轉折部內側並鉤設有一沿著該垃圾筒內壁向下懸垂之推拉桿，而且該推拉桿之底端係正好套入該垃圾筒底部所設具有適當大小之對應孔洞中；其特徵為：該腳踩式掀蓋裝置主要乃係由一水平驅動桿、一擺桿及一踏板所組成，其中

該水平驅動桿，乃係由一自該垃圾筒底部外側適當位置處所貫入之水平圓桿所構成，其除了以其內端套置在對側內壁所設之固定跨槽中外，該水平驅動桿之外端則係被彎折成一階級構造；

該擺桿，乃係由一具適當長度之直桿所構成，該擺桿除了以其一端垂直固接在該水平驅動桿之近內端處，以使其得以隨著該水平驅動桿之轉動而擺動外，其另一端則係正好與該推拉桿之底端樞接成一體；而且該擺桿之沿伸方向係大致與該階級構造之彎折方向呈反向對應；

而該踏板，則係套設在該水平驅動桿最外側所設之階級構造處，俾提供使用者之踩踏功能，故當使用者以腳踩踏傾斜處於最高位置處之踏板時，乃可驅使該水平驅動桿產生轉動，進而使該推拉桿因該擺桿之向上擺動而向上移動，進而達到掀開垃圾筒所設頂蓋之功效；反之，當使用者將腳移開該踏板時，該頂蓋即可因其自重而向下覆蓋，進而使該擺桿因該推拉桿之向下移動而向下擺動，從而使

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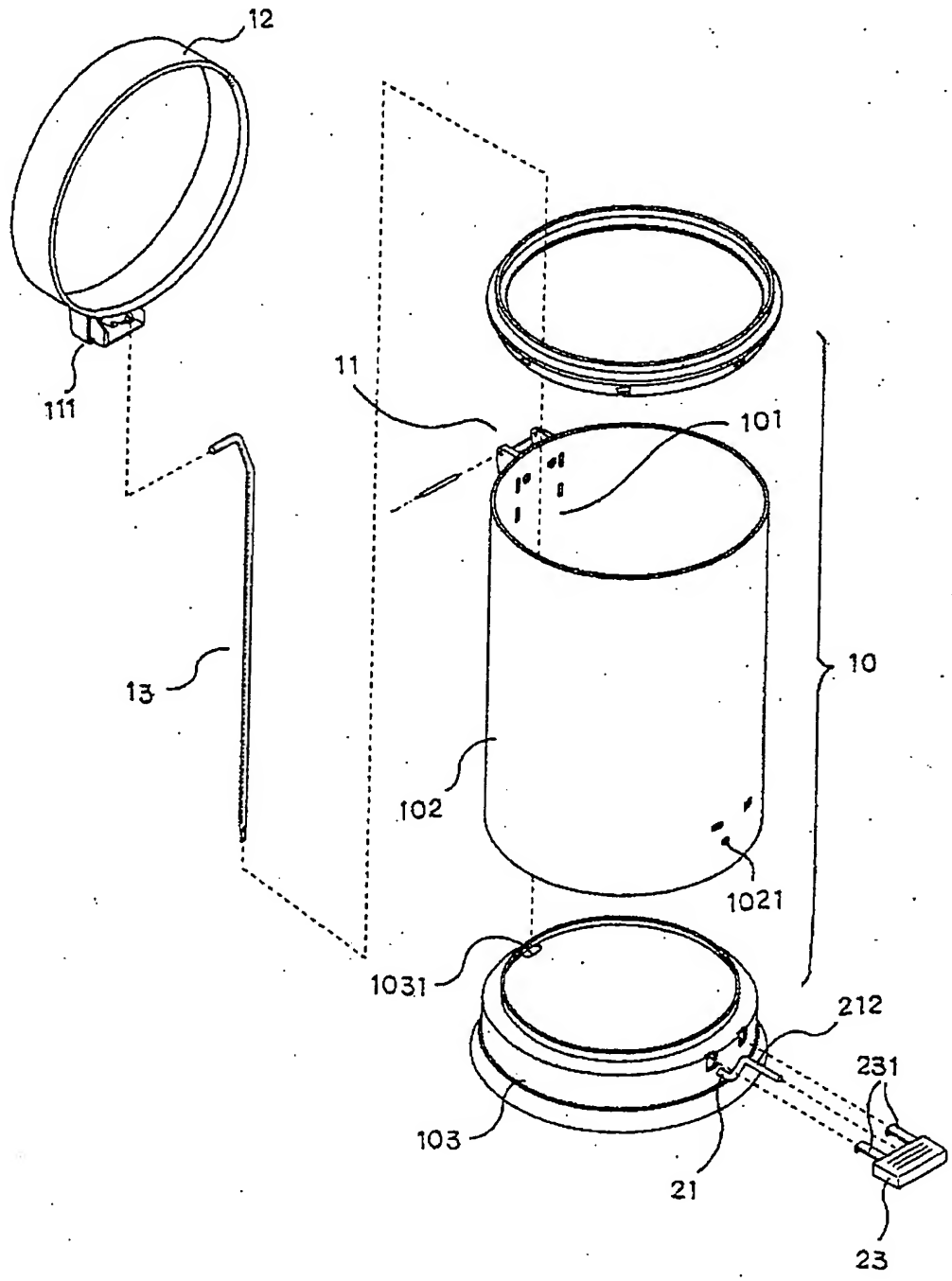
裝 訂 線

六、申請專利範圍

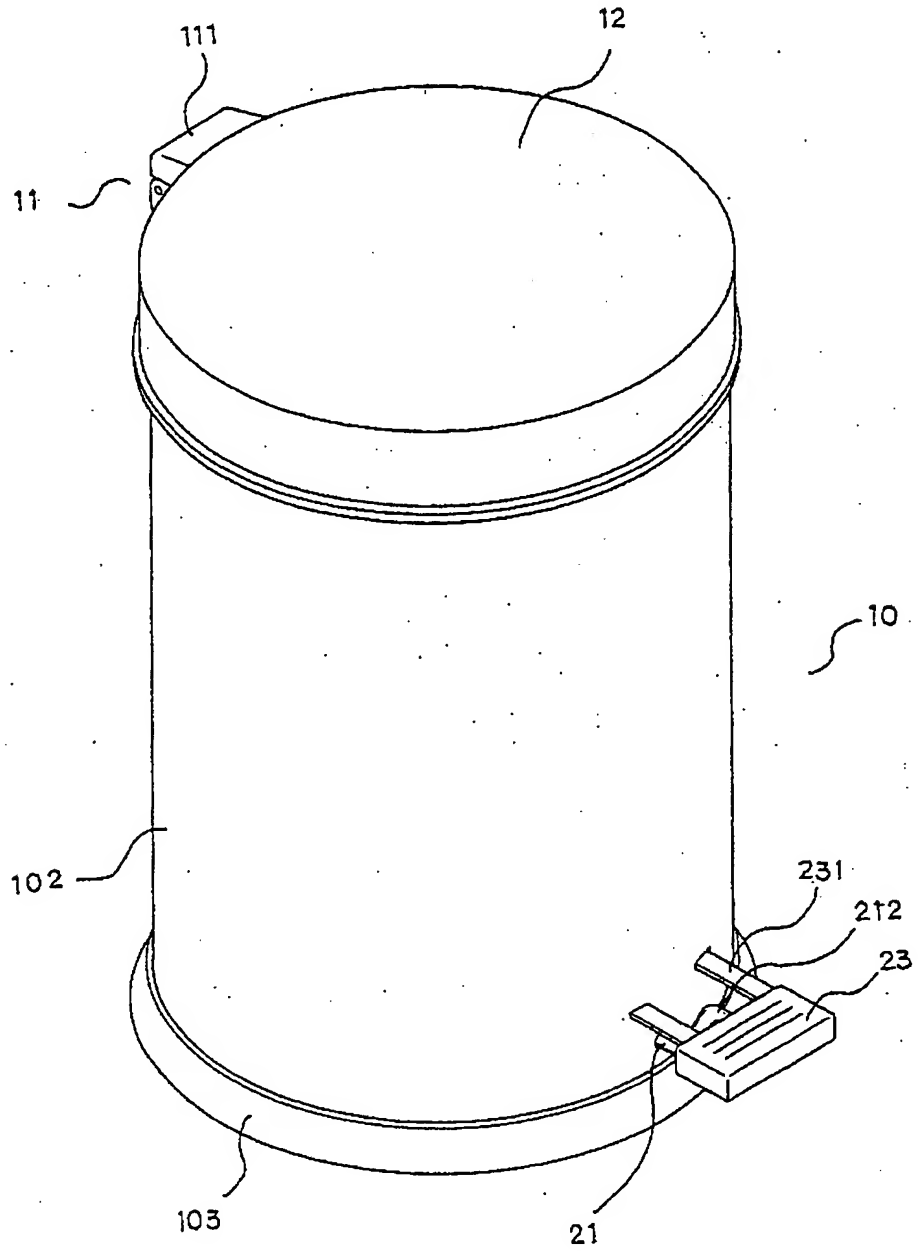
該踏板得以再次回復至傾斜最高位置處，以提供下一回垃圾筒頂蓋之踩踏掀開功能者。

圖式



第一圖

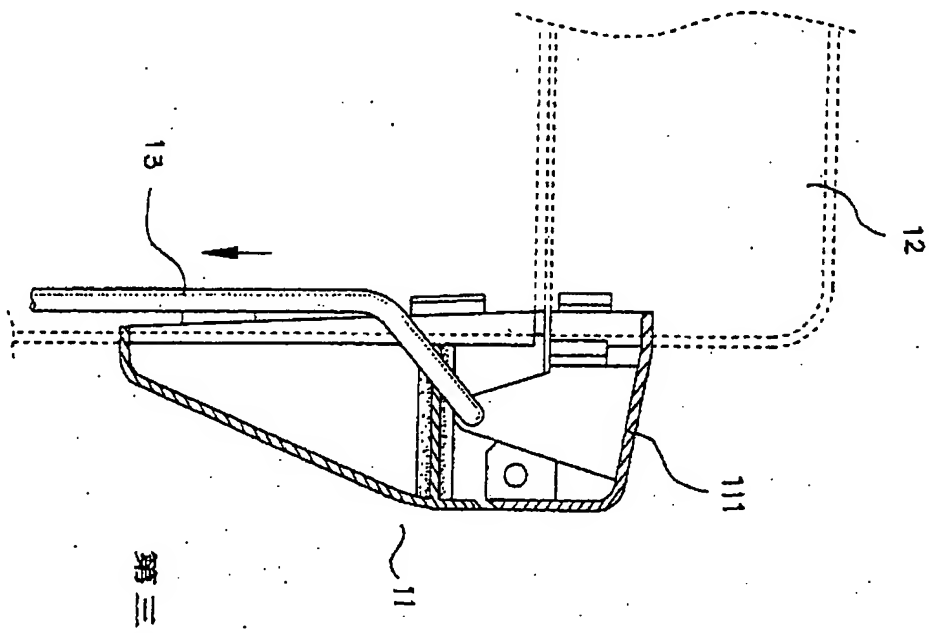
圖式



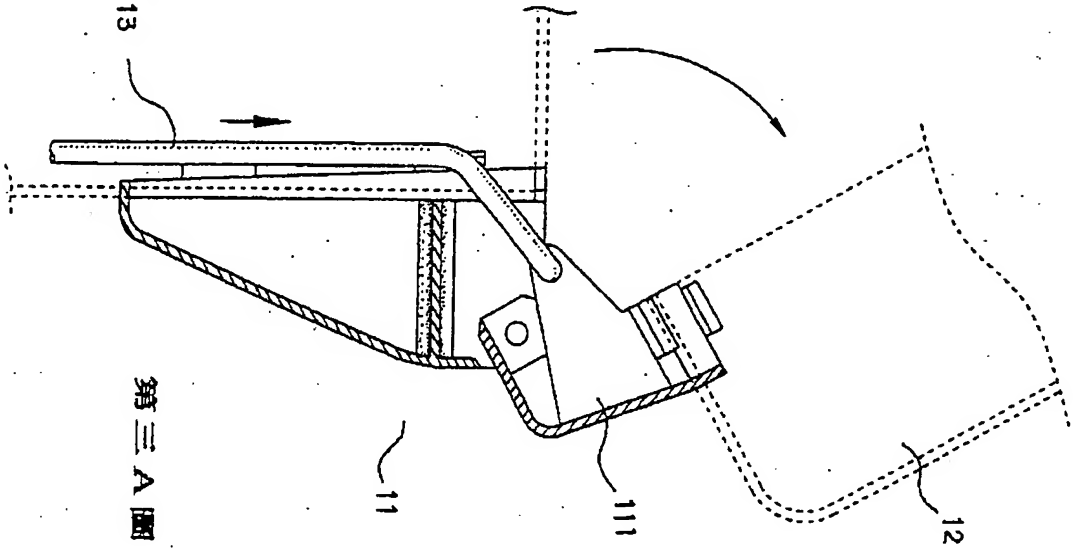
第二圖

A9
B9
C9
D9

圖式



第三B圖



第三A圖

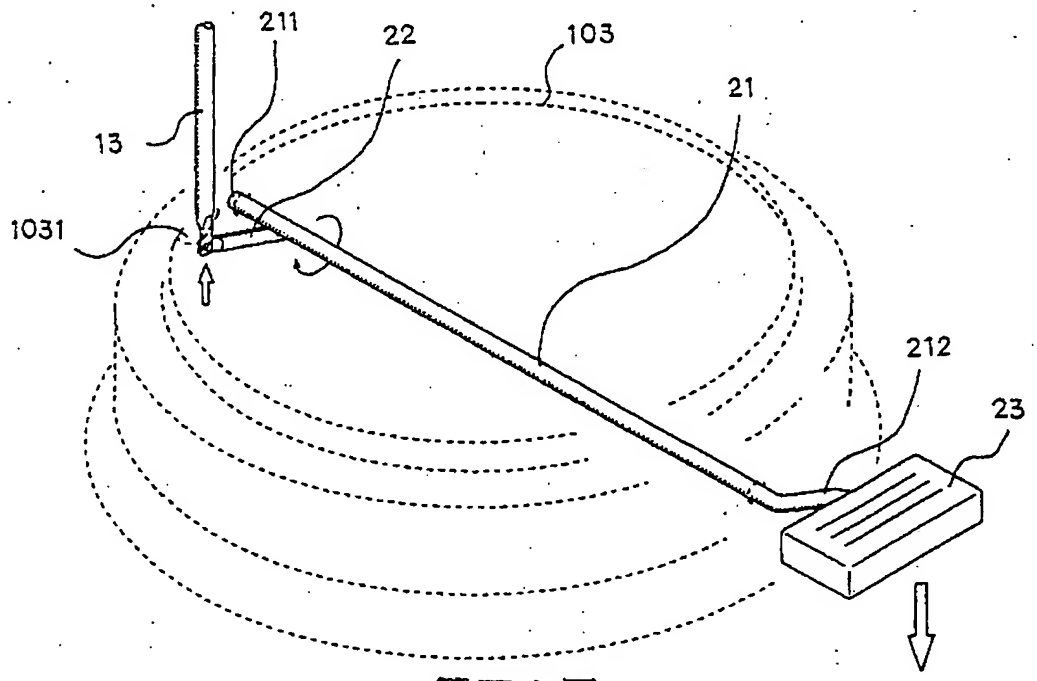
（請先閱讀背面之注意事項再行繕製）

裝

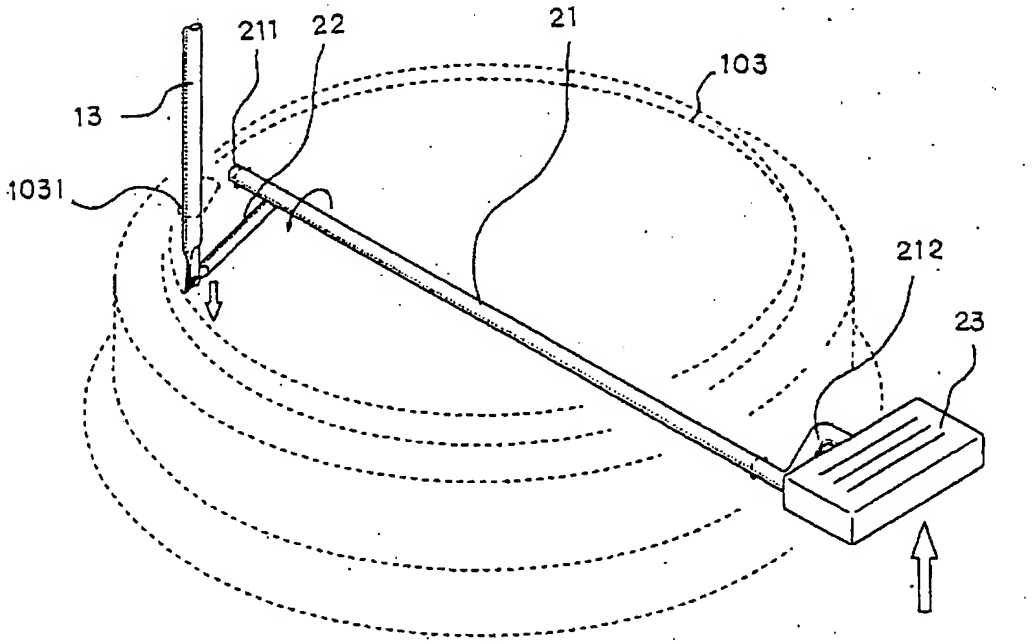
訂

線

圖式



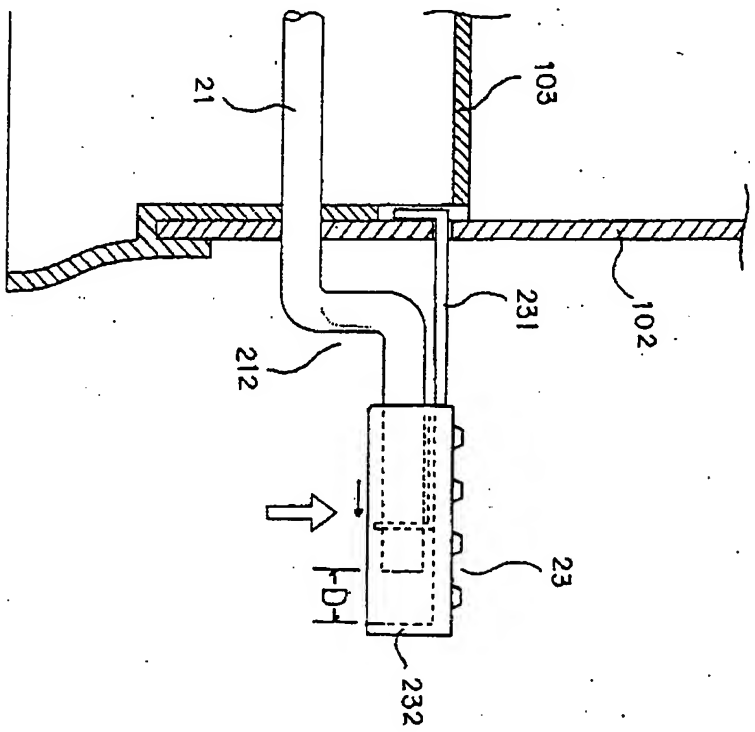
第四A圖



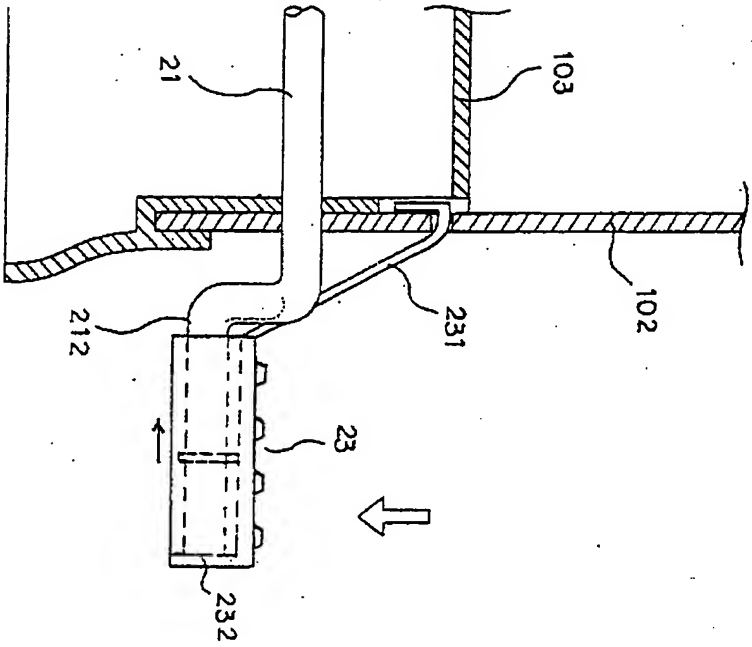
第四B圖

A9
B9
C9
D9

圖式



第五A圖



第五B圖

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裝

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